

Appl. No. 10/849,282
Amendment dated November 21, 2006
Reply to Office Action of July 11, 2006

REMARKS

A typographical amendment to claim 1 has been made; that is, a comma in the first line has been removed. Amended claim 1 includes no new matter.

Claims 6 - 9 have been added. New claim 6 includes no new matter. For example, claim 1 of the application as filed presents a "topical pharmaceutical composition for the treatment of inflammation." New claim 7 includes no new matter. For example, page 2, lines 8-9 of the specification as filed states that the cream "was found to be non-irritating to the skin when applied." New claim 8 includes no new matter. For example, claim 1 of the application as filed presents a "topical pharmaceutical composition for the treatment of inflammation." Furthermore, page 10, line 21 through page 11, line 14 presents a study in which "[a] 10 µl amount of each [of the cream that is the subject of the above-identified application and a control cream] was applied in duplicate to the flexor surface of each subjects forearms and left in place for one hour." New claim 9 includes no new matter. For example, page 11, lines 13-14 of the specification as filed states that "[n]one of the subjects reported any adverse events during, including skin irritation, throughout the study."

Applicants note that the text of previously presented claim 1 is now correctly provided in the Listing of Claims to reflect the Amendment of September 30, 2005. The Listing of Claims filed on April 20, 2006 did not correctly reflect the Amendment to part f) of claim 1 previously made on September 30, 2005.

Rejections under 35 U.S.C. § 103

Claims 1-5 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,696,105 to Hackler (herein, "Hackler").

Hackler is nonanalogous art with respect to claims 1-5

Hackler teaches a "composition treating nail fungus or onychomycosis." See Abstract of Hackler; also see column 4, lines 3-4 and claims 1 and 15 of Hackler. Furthermore, Hackler teaches application of the composition to the nail. See column 1, lines 5-8 of Hackler. As Hackler states,

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"[t]he nail plate is a relatively thick structure which inhibits penetration of the drug being applied." See column 1, lines 28-29 of Hackler. In using the term "topical" (see, e.g., column 4, lines 3-4 of Hackler) Hackler does not mean the application of a formulation to skin. Webster's II New Riverside Dictionary (Office Edition) (rev. ed., 1996) presents the relevant definition of "topical" as "[o]f or applied to an isolated part of the body." Nowhere does Hackler describe the application of a formulation to skin.

In contrast to Hackler, claim 1 of the present application teaches a "topical water-in-oil pharmaceutical cream composition for the treatment of inflammation" which includes propylene glycol. Inflammation is a reaction of the body to any of a number of stimuli, which can be, for example, of biological, chemical, or radiological origin. By contrast, a fungal infection, which the composition of Hackler is intended to treat, is a specific disease state induced by a specific microorganism, a fungus. One skilled in the art of developing pharmaceuticals for the treatment of inflammation would not think to look to the art of treating fungal infections.

In order for the Examiner to rely on a reference in making a rejection under 35 U.S.C. § 103, "the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." See MPEP § 2141.01(a). The treatment of fungal infections or the development of compositions for such treatment, as in Hackler, is not within the field of endeavor of the present application, which is the treatment of inflammation and the development of a composition for such treatment.

Furthermore, the present application teaches the application of the composition of claim 1 to the skin, not a nail. Whereas, as Hackler states, a nail inhibits penetration of an applied drug, the skin is a much more permeable structure. Because a nail and the skin have much different permeabilities to a drug, one skilled in the art of developing pharmaceuticals intended to be absorbed through the skin would not think to look to the art of formulations intended to be absorbed through a nail, such as presented in Hackler. The inventor associated with the present application was concerned with the particular problem of developing a composition and a method for treating inflammation by application of the composition to the skin. A composition for the treatment of a

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fungal infection by application to a nail, such as taught by Hackler, is not reasonably pertinent to the problem of developing a composition and a method for treating inflammation by application of the composition to the skin.

Because Hackler is neither within the field of endeavor of the present Applicant nor reasonably pertinent to the particular problem with which the inventor associated with the present application was concerned, Hackler is non-analogous to the present application. Therefore, Hackler cannot be relied upon as a reference in rejecting claims of the present application under 35 U.S.C. § 103(a). Consequently, claims 1-5 of the present application should be found not obvious over Hackler.

Motivation for modifying Hackler is not shown: A prima facie case of obviousness is not established with respect to claims 1-5

To establish a *prima facie* case of obviousness, "there must be some suggestion or motivation ... to modify the reference or to combine reference teachings." See MPEP § 2142.

The Examiner states that "[i]t would have been obvious to one of ordinary skill in the art at the time of invention to incorporate propylene glycol for hexylene glycol in the mometasone topical composition." Office Action of December 27, 2005, p. 3. The Examiner's statement is conclusory, and does not identify a source of a suggestion or motivation to modify the teachings of Hackler.

"A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references." MPEP 2143.01, p. 2100-131 (quoting *ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993)). The Examiner has neither provided an objective reason to modify the teachings of Hackler by substituting propylene glycol for hexylene glycol in a cream formulation, nor an objective reason to modify the lotion formulation presented in column 3, lines 22-67 of Hackler. The Examiner has not satisfied the requirement of providing a "suggestion or

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motivation ... to modify the reference" and, therefore, has not established a *prima facie* case of obviousness. Consequently, claims 1-5 of the present application should be found not obvious over Hackler.

Munayyer teaches away from use of propylene glycol in an anti-inflammatory cream composition

U.S. Patent No. 4,808,610 to Munayyer et al. (herein, "Munayyer"), states that "poor solubility characteristics [of mometasone furoate] hindered the development of a ... cream with superior anti-inflammatory activity. When the [mometasone furoate] was partially dissolved and partially suspended in propylene glycol based cream formulations, the resulting formulations did not possess the necessary efficacy." Column 1, lines 17-24 of Munayyer. At the time the invention of the present application was made, one of ordinary skill in the art would have been aware of Munayyer. One of ordinary skill in the art developing a pharmaceutical formulation of mometasone furoate would have been discouraged by this text of Munayyer from basing the formulation on propylene glycol.

Furthermore, Munayyer states that "[w]hen the [mometasone furoate] was completely dissolved in oleyl alcohol/propylene glycol based cream formulations, the resulting formulations not only lacked the required activity but also were found to be irritating in a rabbit dermal test." Column 1, lines 24-28 of Munayyer. Thus, not only does Munayyer teach that propylene glycol based formulations of mometasone furoate are ineffective in reducing inflammation, Munayyer further teaches that propylene glycol based formulations of mometasone furoate will induce irritation - an undesirable effect. Irritation is undesirable regardless of whether the intention is to develop a composition for treating inflammation, a composition for treating nail fungus, or a composition for treating any other disease, disorder, or symptom. A pharmaceutical which cannot be tolerated by a patient because of irritation induced is useless. Aware of this teaching of Munayyer, one of ordinary skill in the art would have avoided including propylene glycol in developing a mometasone furoate composition.

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The Examiner's statement on page 4 of the Office Action of December 27, 2005 that "Applicant's arguments with regard to US patent 4,808,610 [Munayyer] are considered moot since the outstanding rejection under 35 USC 103 is not based on US 4,808,610" is flawed for two reasons. First, "prior art must be considered in its entirety, including disclosures that teach away from the claims." See MPEP § 2141.03. Whether the Examiner or the Applicant brings a prior art document to light is immaterial. Once the prior art document has been brought to light, it must be considered, because it provides information valuable in assessing the state of the art at the time of the invention. Second, Hackler incorporates Munayyer by reference. See column 2, lines 9-12 of Hackler. By citing Hackler, the Examiner simultaneously brought Munayyer to light as prior art. Thus, Munayyer must be considered.

Because Munayyer directly teaches away from the use of propylene glycol in a mometasone furoate composition, one of ordinary skill in the art would not have substituted propylene glycol in the cream formulation of Hackler at the time of invention for the present application.

On page 2 of the Office Action of July 11, 2006, the Examiner stated that the Applicant's "[a]rguments directed to intended use is considered moot since the intended use of the composition does not lend patentable weight to claims directed to the composition." The Examiner's statement is off-point. The burden is on the Examiner to provide some objective reason to modify the teachings of Hackler. At the time of invention for the present application, one of ordinary skill in the art was directly informed by Munayyer that mometasone furoate cream formulations based on propylene glycol caused irritation. Because a composition which cannot be tolerated by a patient because of induced irritation is useless, one of ordinary skill in the art would have avoided including propylene glycol in a mometasone furoate cream formulation regardless of the use envisioned. For example, in treating a nail fungus, the therapeutic compound must be delivered to the nail bed. See column 1, lines 47-49 of Hackler. The nail bed contains nerves. Thus, a formulation which causes irritation and cannot be tolerated by a patient would be just as useless in treating a nail fungus as it would be in treating inflammation. Given that the burden is on the Examiner to provide some objective reason to modify the teachings of Hackler, and that the Examiner has failed to provide any objective reason,

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the Examiner has not established a *prima facie* case of obviousness. Consequently, claims 1-5 of the present application should be found not obvious over Hackler.

In summary, because Hackler is non-analogous art with respect to the present application, because the Examiner has failed to provide any objective reason to modify the teachings of Hackler to arrive at the formulations described in the present application, and because Munayyer teaches away from a propylene glycol based mometasone furoate cream formulation, claims 1-5 of the present invention have not been shown to be obvious under 35 U.S.C. § 103(a) over Hackler. Therefore, Appellants respectfully request that the rejection under 35 U.S.C. § 103(a) of claims 1-5 be reversed and claims 1-5 be deemed patentable.

Applicants respectfully request a one month extension of time and authorize the Commissioner for Patents to charge the required fee to Deposit Account Number 22-0261. If any other fee is necessary or if a refund is due, Applicants authorize the Commissioner for Patents to charge the necessary fee or credit the refund due to Deposit Account Number 22-0261.

All of the stated grounds of rejection have been rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

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A Notice of Allowance for claims 1-9 is respectfully requested.

Respectfully submitted,



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